REMARKS

The Office Action dated May 19, 2006, has been received and carefully noted. The above amendments and the following remarks are submitted as a full and complete response thereto.

By this Amendment, claims 2 and 7 have been canceled, claims 1, 3-6 and 8-11 have been amended and claims 12-47 have been added. Support for new claims 12-25 can be found on at least line 25, page 2 to line 4, page 4; lines 10-20 on page 6; line 3, page 13 to line 5, page 14; step S7 in Figure 8; and step S26 in Figure 17 of the Specification as originally filed. No new matter has been added. Claims 1, 3-6 and 8-47 are pending and respectfully submitted for consideration.

Rejections Under 35 U.S.C. § 103

Claims 1-9 and 11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lipps et al. (U.S. Patent No. 5,741,182, "Lipps") in view of Marinelli (U.S. Patent No. 6,157,898), Tosaki et al. (U.S. Patent No. 6,312,335 B1, "Tosaki") and Lipson (U.S. Patent No. 5,435,554). Lipps was cited for disclosing many of the claimed elements of the invention with the exception of a piezoelectric buzzer incorporated in the input device, the acceleration correlation signal having variations in magnitude levels that correspond to the acceleration of the input device, and causing a movement in the ball character being displayed on the screen. Marinelli was cited for teaching a piezoelectric buzzer incorporated in the input device. Tosaki was cited for teaching the acceleration correlation signal having variations in magnitude levels that correspond to the acceleration of the input device. Lipson was cited for teaching causing a movement in the ball character being displayed on the screen.

To the extent that the above-noted rejections remain applicable to the claims currently pending, the Applicants traverse the rejections and respectfully submit that claims 1-9 and 11 recite subject matter that is neither disclosed nor suggested by the cited references.

In the present invention, the acceleration of the input device that is operated by the game player is detected. The detection of the acceleration of the input device makes the ball in the game screen move in accordance with the detection result.

Lipps discloses whether or not the ball is hit at the timing that the centrifugal switch is turned on. See column 3, lines 12-18 of Lipps. However, Lipps fails to teach or suggest how the course of the ball is determined. Lipps further fails to disclose or suggest the movement of the ball after the ball is hit back. As acknowledged in the Office Action, Lipps only discloses that if the speed of the swing is detected, it is possible to make better simulation. However, Lipps fails to teach or suggest how the speed of the swing can be rectified to the ball movement. Specifically, determining a parameter for a movement of the ball character after being hit back based on the magnitude level of the acceleration correlated signal, as recited in claim 1.

Marinelli discloses a movable object separated from the hand of the human being. Marinelli measures the speed of the separated or non-held object while the object is not significantly or materially altered and shows the measured value to the player. See column 2, lines 27-35 of Marinelli. Marinelli does not detect the acceleration of the input device to move the ball on the game screen. In addition, there is no disclosure or suggestion in Marinelli of how to determine a parameter for a movement of the ball character after being hit back based on the magnitude level of the

acceleration correlated signal. The Applicants note that the ball impact and the strength of the swing are respectively determined by the respective dedicated sensors. *Assuming arguendo* the acceleration sensor of Marinelli is combined with Lipps, it would not have been obvious to one of ordinary skill in the art to determine how the ball impact can be determined, because neither reference discloses or suggests a parameter for a movement of the ball character after being hit back based on the magnitude level of the acceleration correlated signal. As such, Marinelli fails to cure the deficiencies in Lipps with respect to claim 1.

Tosaki discloses that the timing of the impact of the ball should be taken as the timing at which a press signal is input from the trigger button SW. See column 16, lines 47-49 of Tosaki. The force of the bat swing is calculated on the basis of the detection signals from the acceleration sensors, and the path of swing is calculated on the basis of the angle of the bat. See column 16, lines 40-47 of Tosaki. However, Tosaki does not disclose how the game is rectified by the force and path of the swing, and the detecting method of the bat angle. As such, Tosaki, like Lipps and Marinelli, fails to disclose or suggest a game processor for receiving the acceleration correlated signal and determining a parameter for a movement of the ball character after being hit back based on the magnitude level of the acceleration correlated signal, as recited in claim 1.

Lipson discloses the batted ball determined at the time of the depression of the trigger button. See step 214 in Figure 4d of Lipson. Then, the trajectory of the batted ball is calculated on the basis of the initial hitting angle of the ball and the initial speed of the ball at the time when the ball is separated. See step 426 in Figure 7 of Lipson. Lipson determines the ball moving direction by the position of the joystick. The initial

ball hitting angle, i.e., the direction of the ball is determined by the position of the joystick at the time of the depression of the button. See column 5, lines 17-18 and column 15, lines 67-68 to column 16, lines 1-2 of Lipson. However, Lipson also fails to disclose or suggest a game processor for receiving the acceleration correlated signal and determining a parameter for a movement of the ball character after being hit back based on the magnitude level of the acceleration correlated signal, as recited in claim 1. As such, Lipson fails to cure the deficiencies in the combination of Lipps, Marinelli and Tosaki with respect to claim 1.

Claim 10 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Lipps, Marinelli, Tosaki and Lipson as applied to claims 1-9 and 11 in view of Zur et al. (U.S. Patent No. 5,833,549, "Zur"). The Office Action took the position that Lipps, Marinelli, Tosaki and Lipson disclose many of the claimed elements of the invention with the exception of the game processor evaluating a peak value of a moving speed of the input device based upon the acceleration correlated signal, and then evaluating a parameter for the change of the ball character on the basis of at least the peak value of the moving speed of the input device. Zur was cited for curing this deficiency.

Zur discloses that as soon as the bat enters the spatial sector (see FIG. 4), an entry time t1 is determined, because the controller notes the time when the return signal has been received. Similarly, as soon as the bat leaves the spatial sector, an exit time t2 is determined, because the controller notes the time when the return signal is no longer being received. Intermediate the entry and exit times, the controller is noting the light intensity level of the output signal for each measuring cycle (60 μsecs). If the current level is greater than the previous level, then the current level is stored as the

"peak" level. In this way, it is assured that the maximum or peak level over the cross-section of the sector will be obtained. This peak is then correlated with an elevation or height distance of the bat relative to the housing. This correlation can be generated by an algorithm, or preferably in a look-up table stored in a memory accessible to the controller 30. The peak determines the height of the bat, and this height, together with the entry and exit times, is used to calculate the speed of the bat. Thus, one transceiver and light beam are used to determine both bat height and speed.

With respect to claim 10, the Applicants respectfully submit that Zur fails to cure the deficiencies in Lipps, Marinelli, Tosaki and Lipson. In particular, there is no disclosure or suggestion in Zur that the game processor evaluates a peak value of a moving speed of the input device based upon the acceleration correlated signal. Zur merely discloses that the current level is stored as the peak level and that peak is then correlated with an elevation or height distance of the bat relative to the housing. Further, there is no disclosure or suggestion in Zur that the game processor evaluates a parameter for the change of the ball character on the basis of at least the peak value of the moving speed of the input device. Therefore, the combination of references fails to disclose or suggest each and every feature of the invention as recited in claim 10.

Under U.S. patent practice, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or

references when combined) must teach or suggest all the claim limitations. See M.P.E.P. § 2142.

In view of the above, the Applicants respectfully submit that the Office Action has failed to establish a *prima facie* case of obviousness for purposes of a rejection of claim 1 under 35 U.S.C. §103.

New claim 12 is directed to the determination of whether the ball is hit back is performed separately from the calculations of the strength of the swing and the direction of the ball.

New claim 26 is directed to the determination of a moving direction of said ball character as a parameter for a movement of the ball character.

New claim 39 is directed to determining that the acceleration switch is turned on and a position of the ball character and a moving direction of the ball character. The Applicants respectfully submit that none of the cited references disclose or suggest that the features of the invention as recited in new claims 12, 26 and 39 and the claims dependent therefrom.

Conclusion

The Applicants respectfully submit that claims 1, 12, 26 and 39 are allowable. Claims 3-11 depend from claim 1, claims 13-25 depend from claim 12, claims 27-38 depend from claim 26 and claims 40-47 depend from claim 39. The Applicants further submit that each of these claims incorporate the patentable aspects thereof, and are therefore allowable for at least the same reasons as discussed above. Accordingly, the Applicants respectfully request withdrawal of the rejections, allowance of claims 1, 3-6 and 8-47 and the prompt issuance of a Notice of Allowability.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing Attorney Dkt. No. 100341-00008**.

Respectfully submitted,

Rhonda L. Barton
Attorney for Applicants
Registration No. 47,271

Customer No. 004372
ARENT FOX PLLC
1050 Connecticut Avenue, N.W., Suite 400
Washington, D.C. 20036-5339
Tel: (202) 857-6000
Fax: (202) 638-4810

RLB/elz

Enclosures: Petition for Extension of Time (two-month)
Extra Claims Transmittal

TECH/459897.1